Joybee GP2
Mini Projector
User Manual

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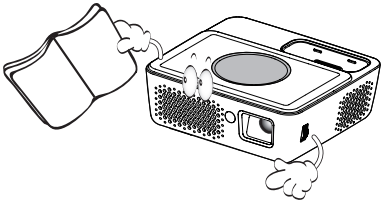
Important safety instructions

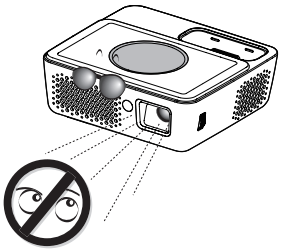
Your projector is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that you follow the instructions mentioned in this manual and marked on the product.

Safety Instructions

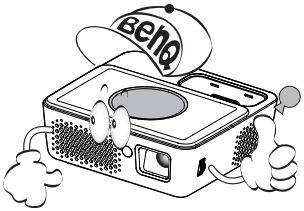
1. **Please read this manual before you operate your projector.** Save it for future reference.



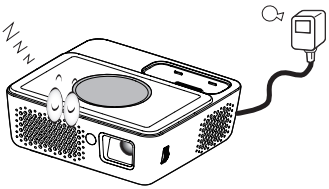
2. **Do not look straight at the projector lens during operation.** The intense light beam may damage your eyes.



3. **Refer servicing to qualified service personnel.**



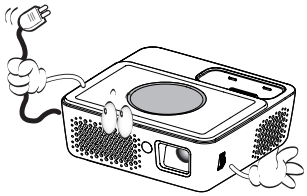
4. In some countries, the line voltage is NOT stable. This projector is designed to operate safely within a mains voltage of 19 volts DC, but could fail if power cuts or surges of ±10 volts occur. **In areas where the mains voltage may fluctuate or cut out, it is recommended that you connect your projector through a power stabilizer, surge protector or uninterruptible power supply (UPS).**



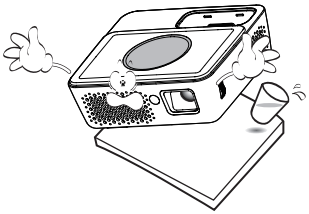
5. Do not block the projection lens with any objects when the projector is under operation as this could cause the objects to become heated and deformed or even cause a fire.

Safety Instructions (Continued)

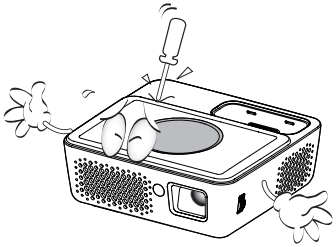
6. Never replace any electronic components unless the projector is unplugged.



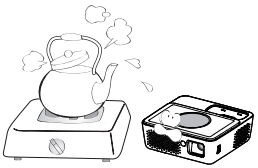
7. Do not place this product on an unstable cart, stand, or table. The product may fall, sustaining serious damage.



8. Do not attempt to disassemble this projector. There are dangerous high voltages inside which may cause death if you should come into contact with live parts. Refer servicing only to suitably qualified professional service personnel.

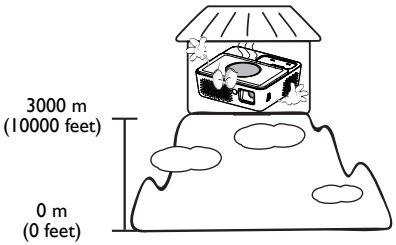


9. When the projector is under operation, you may sense some heated air and odor from its ventilation grill. It is a normal phenomenon and not a product defect.
10. Do not place this projector in any of the following environments.
    - Space that is poorly ventilated or confined. Allow at least 50 cm clearance from walls and free flow of air around the projector.
    - Locations where temperatures may become excessively high, such as the inside of a car with all windows rolled up.
    - Locations where excessive humidity, dust, or cigarette smoke may contaminate optical components, shortening the projector's life span and darkening the image.

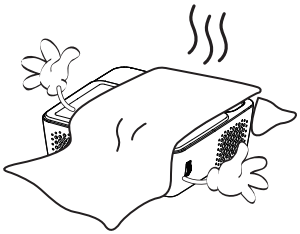


Safety Instructions (Continued)

- Locations near fire alarms
- Locations with an ambient temperature above 40°C / 104°F
- Locations where the altitudes are higher than 3000 m (10000 feet).

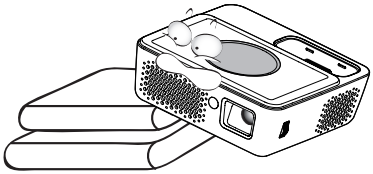


11. Do not block the ventilation holes.
    - Do not place this projector on a blanket, bedding or any other soft surface.
    - Do not cover this projector with a cloth or any other item.
    - Do not place inflammables near the projector.

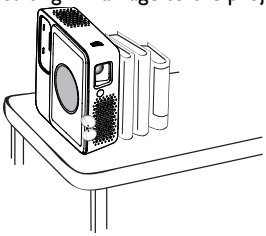


If the ventilation holes are seriously obstructed, overheating inside the projector may result in a fire.

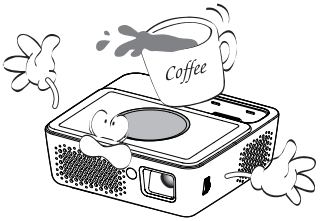
12. Always place the projector on a level, horizontal surface during operation.

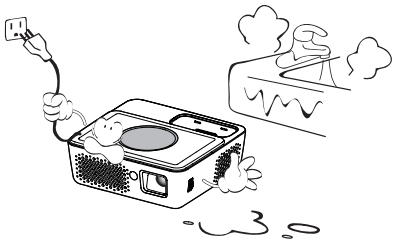


13. Do not stand the projector on end vertically. Doing so may cause the projector to fall over, causing injury or resulting in damage to the projector.



14. Do not step on the projector or place any objects upon it. Besides probable physical damage to the projector, doing so may result in accidents and possible injury.



Safety Instructions (Continued)	
15. Do not place liquids near or on the projector. Liquids spilled into the projector may cause it to fail. If the projector does become wet, disconnect it from the power supply's wall socket and call BenQ to have the projector serviced. 	

Introduction

Projector features

The projector integrates high-performance optical engine projection and a user-friendly design to deliver high reliability and ease of use.

The projector offers the following features.

- **Advanced LED light source**
  Long lasting LEDs provides a longer life span than traditional lamps.
- **Optical engine with DLP technologies**
  WXGA resolution and a bright picture.
- **Various useful features**
  Supports iPhone/iPod player, multimedia player, document viewer, internal memory, SD card, USB flash drive, USB display
- **Easy to carry**
  The projector is small and light, making it useful for business trips and leisure activities. You can view documents, videos and photos anywhere.
- **Multiple input ports**
  Multiple input ports, including PC, AV, HDMI, USB, and SD card provide flexible connectivity with peripheral devices.
- **Audio input & output**
  Equipped with 2W x 2 speakers with RCA & mini-jack input ports and phone jack output port
- **Convenient menu items**
  Friendly menu is used for all types of inputs, making the projector easy to use.

- **The apparent brightness of the projected image will vary depending on the ambient lighting conditions, selected input signal contrast/brightness settings, and is proportional to projection distance.**
- **The lamp brightness will decline over time and may vary within the lamp manufacturers specifications. This is normal and expected behavior.**

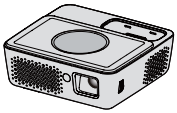
Shipping contents

Carefully unpack and verify that you have all of the items shown below. If any of these items are missing, please contact your place of purchase.

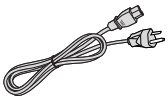
Standard accessories

The supplied accessories will be suitable for your region, and may differ from those illustrated.

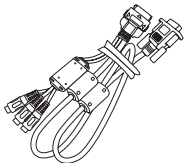
***The warranty card is only supplied in some specific regions. Please consult your dealer for detailed information.**



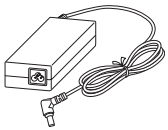
Projector



Power cord



Multi-input cable



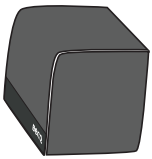
AC adapter

Safety manual

Quick start guide

User manual CD

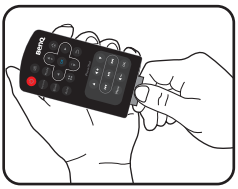
Warranty card*

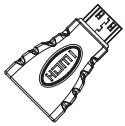


Projector carrying bag

Remote control with battery

Pull the tab before using the remote control.

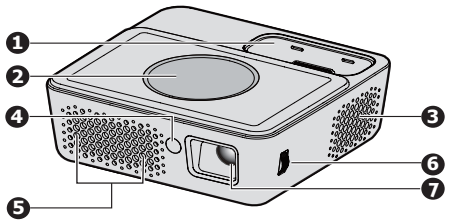




mini HDMI adapter

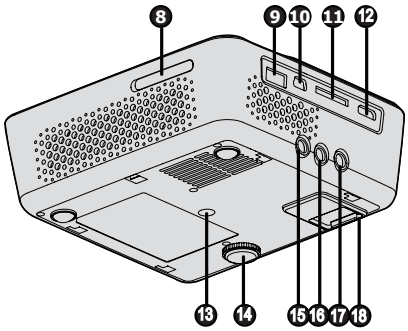
Projector exterior view

Front/upper side



1. iPhone/iPod docking station
2. External control panel (See "Projector" on page 10 for details.)
3. Vent (heated air exhaust)
4. Front IR remote sensor
5. Internal Speakers
6. Focus ring
7. Projection lens
8. SD card slot
9. Type A USB jack
10. Mini-B USB jack
11. Multi-input socket RGB (PC)/Component video (YPbPr/ YCbCr) /Composite video/ Audio input (L/R)
12. HDMI input jack
13. Tripod socket
14. Adjuster foot
15. Audio input jack
16. Audio output jack (for iPod dock / internal memory / SD card / USB Drive / multi-input cable RCA audio in)
17. AC adapter inlet
18. Battery latch

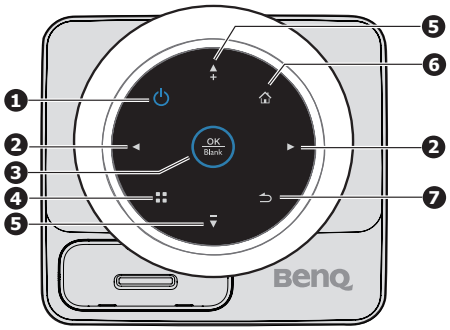
Rear/lower side



Do not block the ventilation openings. Blocking the ventilation openings can cause your projector to overheat and may cause it to fail.

Controls and functions

Projector



1. **Power**
   Toggles the projector between standby mode and on.
   See "Starting up the projector" on page 29 and "Shutting down the projector" on page 63 for details.
2. **Left key**
   When the On-Screen Display (OSD) menu is on:
   - Navigate left to select the desired menu items.
   - Make adjustments. (e.g. brightness, contrast...)

   When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)
   - Play previous video and audio file.
   - Press and hold to rewind video and audio file.
3. **OK/Blank**
   Short press:
   - Confirms a selected function when a menu is displayed.
   - Plays or pauses a video, music, photo slideshow. (Only applied to SD card, internal memory and USB Drive)

   Long press (3 seconds):
   Toggles the Blank.
4. **Menu**
   Turns on the Pop-up setting menu.
5. **Down/Volume down key**
   When the On-Screen Display (OSD) menu is on:
   - Navigate to down to select the desired menu items.
   - Make adjustments. (e.g. manual keystone...)

   When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)
   - Reduces the volume level.
6. **Up/Volume up key**
   When the On-Screen Display (OSD) menu is on:
   - Navigate up to select the desired menu items.
   - Make adjustments. (e.g. manual keystone...)

   When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)
   - Magnifies the volume level.

7. **Home**

   Directly returns to home screen from lower level of OSD.

   Exits application/pop-up message and back to home screen directly.

8. **Right key**

   When the On-Screen Display (OSD) menu is on:

   - Navigate right to select the desired menu items.
   - Make adjustments. (e.g. brightness, contrast...)

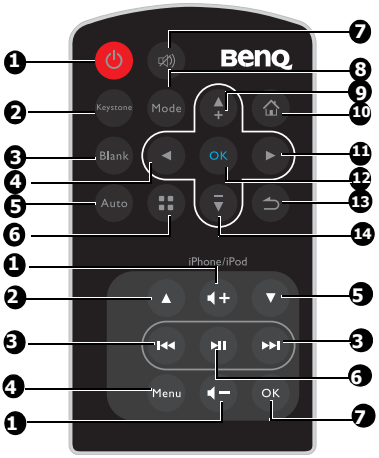
   When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)

   - Play next video and audio file.
   - Press and hold to fast forward video and audio file.

9. **Back**

   Goes back to previous OSD menu, exits and saves menu settings.

Remote control



1. **POWER**
   Toggles the projector between standby mode and on. See "Starting up the projector" on page 29 and "Shutting down the projector" on page 63 for details.
2. **Keystone**
   Manually corrects distorted images resulting from an angled projection. See "Correcting keystone" on page 31 for details.
3. **Blank**
   Toggles Blank on and off. See "Hiding the image" on page 31 for details.
4. **Left key**
   When the On-Screen Display (OSD) menu is on:
   - Navigate left to select the desired menu items.
   - Make adjustments. (e.g. brightness, contrast...)
   When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)
   - Play previous video and audio file.
   - Press and hold to rewind video and audio file.
5. **Auto**
   Automatically determines the best picture timings for the displayed computer image. See "Auto-adjusting the image" on page 30 for details.
6. **Menu**
   Turns on the Pop-up setting menu.
7. **Mute/unmute**
   Turns on/off volume during video or music playback. (Only applied to SD card, USB Drive, internal memory, iPhone and iPod)
8. **Mode**
   Selects an available picture setup mode. See "Selecting a picture mode" on page 35 for details.
9. **Up/Volume up key**
   When the On-Screen Display (OSD) menu is on:
   - Navigate up to select the desired menu items.
   - Make adjustments. (e.g. manual keystone...)
   When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)
   - Magnifies the volume level.
10. **Home**
    Directly returns to home screen from lower level of OSD.
    Exits application/pop-up message and back to home screen directly.

11. Right key

When the On-Screen Display (OSD) menu is on:

- Navigate right to select the desired menu items.
- Make adjustments. (e.g. brightness, contrast...)

When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)

- Play next video and audio file.
- Press and hold to fast forward video and audio file.

12. OK

Confirms a selected function when a menu is displayed.

Plays or pauses a video, music, photo slideshow. (Only applied to SD card, internal memory and USB Drive)

13. Back

Returns to upper level of OSD.

Closes pop-up setting menu of OSD.

Leave current application of OSD.

14. Down/Voume down key

When the On-Screen Display (OSD) menu is on:

- Navigate to down to select the desired menu items.
- Make adjustments. (e.g. manual keystone...)

When the On-Screen Display (OSD) menu is off: (Only applied to SD card, internal memory and USB Drive)

- Reduces the volume level.

iPhone/iPod

Remote control over iPhone or iPod is not only workable in power-on mode but also standby mode in which GP2 acts as a docking speaker.

1. Volume up/down keys

Adjust iPhone or iPod volume.

2. Up key

Scroll up to select a video or music within a file list of 'iPod' menu.

3. Previous/Next keys

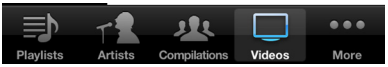
Skip to the beginning of the current/next video or music.

Press and hold to rewind/fast-forward the current video or music.

4. Menu/Back key

Bring up iPod menu

Switch between submenu in 'iPod' menu.



Go to previous menu within 'iPod' menu.

5. Down key

Scroll down to select a video or music within a file list of iPod menu.

6. Play/pause key

Play/pause music or video within a file list of 'iPod' menu in iPhone or iPod.

If the iPhone or iPod is at the Main Menu, pressing Play/Pause will cause the iPhone or iPod to start playing all of it's music.

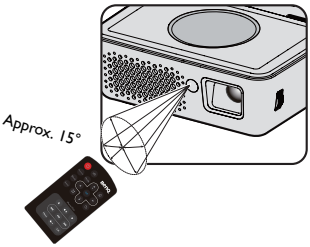
7. OK key

Select a menu or feature in iPod menu.

Confirm to play a music or video within a file list of 'Pod' menu in iPhone or iPod.

Remote control effective range

Infra-Red (IR) remote control sensor is located on the front of the projector. The remote control must be held at an angle within 15 degrees perpendicular to the projector's IR remote control sensor to function correctly. The distance between the remote control and the sensor should not exceed 7 meters (~ 23 feet).

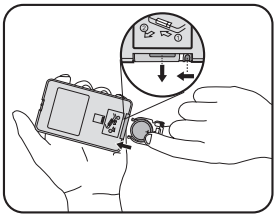


Make sure that there are no obstacles between the remote control and the IR sensor on the projector that might obstruct the infra-red beam.

Replacing the remote control battery

1. Pull out the battery holder.

Please follow the illustrated instructions. Push and hold the locking arm while pulling out the battery holder.



2. Insert the new battery in the holder. Note the positive polarity should face outward.
3. Push the holder into the remote control.

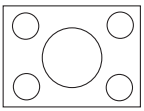
- **Avoid excessive heat and humidity.**
- **There may be battery damage if the battery is incorrectly replaced.**
- **Replace only with the same or equivalent type recommended by the battery manufacturer.**
- **Dispose of the used battery according to the battery manufacturer's instructions.**
- **Never throw a battery into a fire. There may be danger of an explosion.**
- **If the battery is dead or if you will not be using the remote control for a long time, remove the battery to prevent damage to the remote control from possible battery leakage.**

Positioning your projector

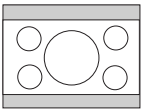
Obtaining a preferred projected image size

The distance from the projector lens to the screen, the zoom setting (if available), and the video format each factors in the projected image size.

16:10 is the native aspect ratio of this projector.



4:3 aspect image in a 16:10 aspect display area



16:10 aspect image scaled to a 4:3 aspect display area

The projector should always be placed horizontally level (like flat on a table), and positioned directly perpendicular (90° right-angle square) to the horizontal center of the screen. This prevents image distortion caused by angled projections (or projecting onto angled surfaces).

The modern digital projector does not project directly forward (like older style reel-to-reel film projectors did). Instead, digital projectors are designed to project at a slightly upward angle above the horizontal plane of the projector. This is so that they can be readily placed on a table and will project forward and upwards onto a screen positioned so that the bottom edge of the screen is above the level of the table (and everyone in the room can see the screen).

If the projector is mounted on a ceiling, it must be mounted upside-down so that it projects at a slightly downward angle.

You can see from the diagram on page 16, that this type of projection causes the bottom edge of the projected image to be vertically offset from the horizontal plane of the projector. When ceiling mounted, this refers to the top edge of the projected image.

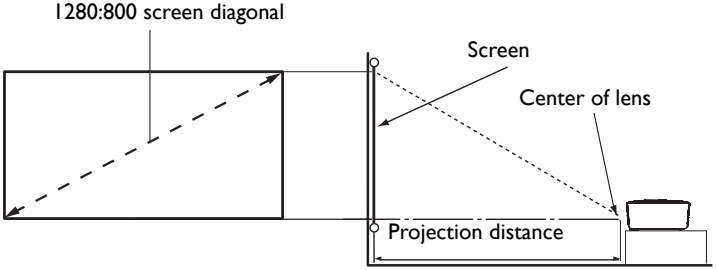
If the projector is positioned further away from the screen, the projected image size increases, and the vertical offset also increases proportionately.

When determining the position of the screen and projector, you will need to account for both the projected image size and the vertical offset dimension, which are proportional to the projection distance.

BenQ has provided a table of screen size to assist you in determining the ideal location for your projector. Refer to "Projection dimensions" on page 16 depending on the projector you are using. There are two dimensions to consider, the perpendicular horizontal distance from the center of the screen (projection distance), and the vertical offset height of the projector from the horizontal edge of the screen (offset).

Projection dimensions

Refer to "Dimensions" on page 69 for the center of lens dimensions of this projector before calculating the appropriate position.



1280:800 screen diagonal			Recommended projection distance from screen in mm
Feet	Inches	mm	Average
2.00	24	610	621
3.33	40	1016	1034
4.67	56	1422	1448
6.00	72	1829	1862
6.66	80	2032	2069

All measurements are approximate and may vary from the actual sizes.BenQ recommends that if you intend to permanently install the projector, you should physically test the projection size and distance using the actual projector in situ before you permanently install it, so as to make allowance for this projector's optical characteristics. This will help you determine the exact mounting position so that it best suits your installation location.

Connection

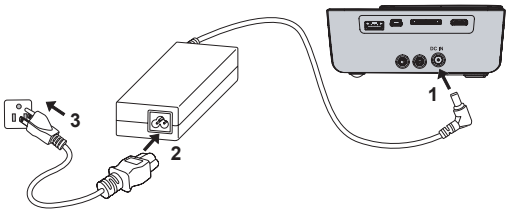
In the connections shown below, some cables may not be included with the projector (see "Shipping contents" on page 8). They are commercially available from electronics stores.

Connecting the power

The projector must be used with the provided AC adapter. Damage caused by the use of an incorrect adapter is not covered under the warranty.

Using the AC adapter

1. Insert the plug from the AC adapter into the DC IN terminal.
2. Insert the appropriate end of the power cord into the AC adapter.
3. Insert the plug on the power cord into a wall outlet. Check that the Power LED indicator on the projector lights blue when using the AC adapter.



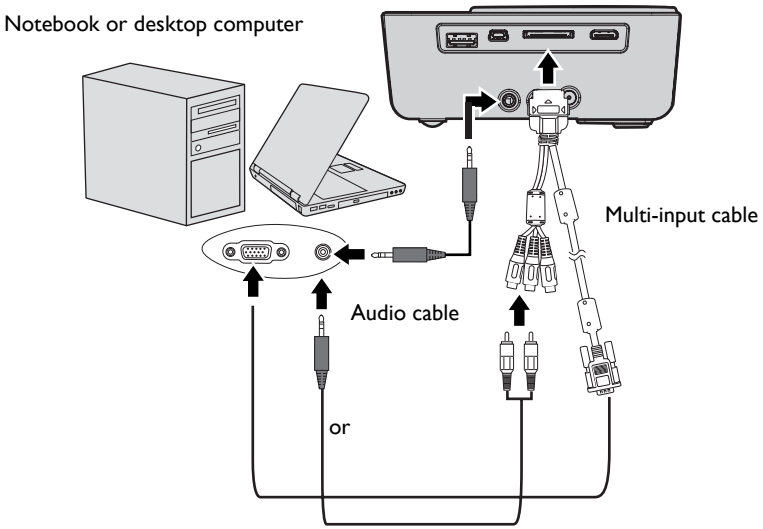
Connecting a computer

The projector provides a VGA input socket that allows you to connect it to both IBM® compatibles and Macintosh® computers. A Mac adapter is needed if you are connecting legacy version Macintosh computers.

To connect the projector to a notebook or desktop computer:

- Using a VGA cable

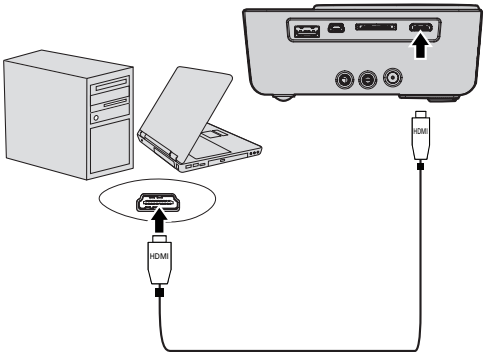
1. Take the supplied multi-input cable and connect one end to the D-Sub output socket of the computer.
2. Connect the other end of the multi-input cable to the **PC/AV** socket on the projector.
3. If you wish to make use of the projector speaker, take a suitable audio cable and connect one end of the cable to the audio output socket of the computer, and the other end to the audio input sockets of the multi-input cable.



Many notebooks do not turn on their external video ports when connected to a projector. Usually a key combo like FN + F3 or CRT/LCD key turns the external display on/off. Locate a function key labeled CRT/LCD or a function key with a monitor symbol on the notebook. Press FN and the labeled function key simultaneously. Refer to your notebook's documentation to find your notebook's key combination.

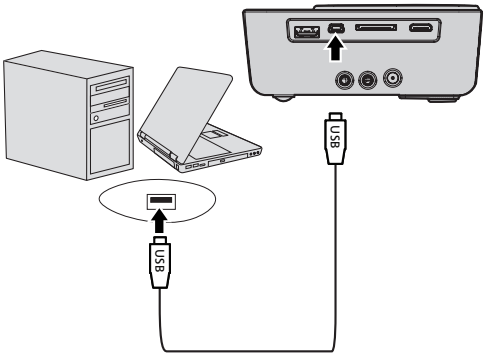
- Using an HDMI cable

1. Take an HDMI cable and connect one end to the HDMI output jack of the computer.
2. Connect the other end of the HDMI cable to the HDMI jack on the projector.



- Using a USB cable

1. Take a USB cable and connect the type A end to the USB output jack of the computer.
2. Connect the mini-B type end of the USB cable to the USB-DISPLAY jack on the projector. When you connect the projector to a computer, you can display computer's image or transfer files from your computer to the internal memory of the projector.



3. If you select USB Display, follow the on-screen message to install the USB driver in your computer first.
4. If you select USB File Transfer, go to My Computer or Windows Explorer to access the projector's files. The projector appears as a Removable Disk. Transfer the files from your computer to the projector by dragging and dropping or copying and pasting.

To disconnect the projector from a computer:

i. Click on the Windows Taskbar.

ii. Click the pop-up message.

iii. Disconnect the USB cable only when the message says that it is safe to remove the hardware.

- **Do not disconnect the USB cable while the files are being copied, as this could result in loss of data or damage to the projector.**
- **The connection will not end if you have projector files open on the computer. Close all projector files and try again.**
- **Other versions of Windows operate similarly. Follow the correct procedure for removing a USB device from your computer safely for your version of Windows.**

Connecting Video source devices

You need only connect the projector to a Video source device using just one of the above connecting methods, however each provides a different level of video quality. The method you choose will most likely depend upon the availability of matching terminals on both the projector and the Video source device as described below:

Terminal name	Terminal appearance	Picture quality
HDMI	HDMI	Best
Component Video	VGA	Better
Video	Video	Good

If the selected video image is not displayed after the projector is turned on and the correct video source has been selected, check that the Video source device is turned on and operating correctly. Also check that the signal cables have been connected correctly.

Connecting an HDMI source device

The projector provides a HDMI input jack that allows you to connect it to an HDMI source device like a Blu-Ray player, a DTV tuner or a display.

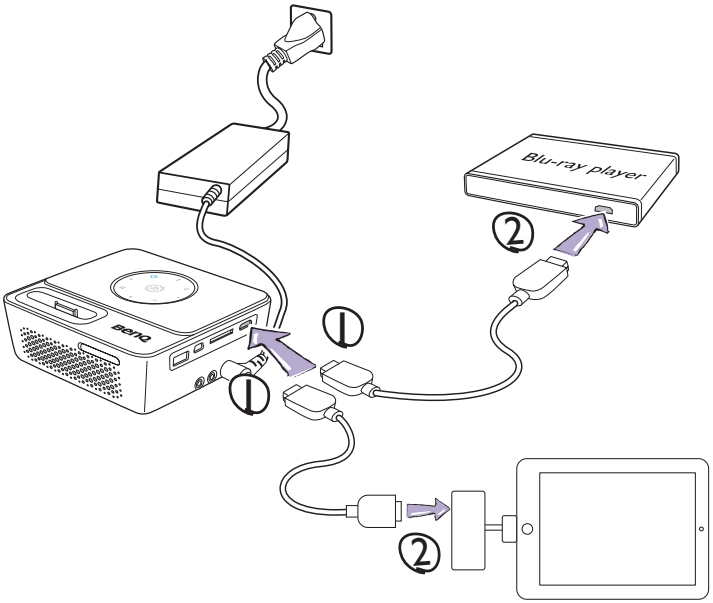
HDMI (High-Definition Multimedia Interface) supports uncompressed video data transmission between compatible devices like DTV tuners, Blu-Ray player and displays over a single cable. It provides pure digital viewing and listening experience.

Examine your Video source device to determine if it has a set of unused HDMI output jacks available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to an HDMI source device:

1. Take an HDMI cable and connect one end to the HDMI output jack of the HDMI source device.
2. Connect the other end of the HDMI cable to the **HDMI** jack on the projector.



- **The HDMI cable (shown in this example) for connection your video output device is not supplied as standard.**
- **The Apple Digital AV Adapter can be purchased from www.apple.com.**

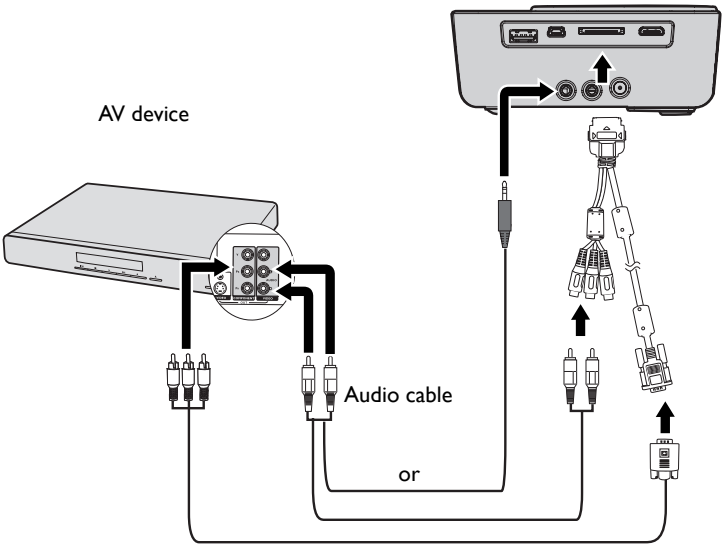
Connecting a Component Video source device

Examine your Video source device to determine if it has a set of unused Component Video output sockets available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to a Component Video source device:

1. Take a Component Video to VGA (D-Sub) adaptor cable and connect the end with 3 RCA type connectors to the Component Video output sockets of the Video source device. Match the color of the plugs to the color of the sockets; green to green, blue to blue, and red to red.
2. Connect the other end of the Component Video to VGA (D-Sub) adaptor cable (with a D-Sub type connector) to the D-Sub jack of the multi-input cable.
3. Connect the other end of the multi-input cable to the **PC/AV** socket on the projector.
4. If you wish to make use of the projector speaker, take a suitable audio cable and connect one end of the cable to the audio output sockets of the Video source device, and the other end to the audio input sockets of the multi-input cable.



- **When audio output jack is connected with the earphone or external speaker, the sound will not come out from the projector speaker.**
- **No sound will come out from the speaker or audio output jack if video signals are not input. Besides, the sound cannot be adjusted either.**

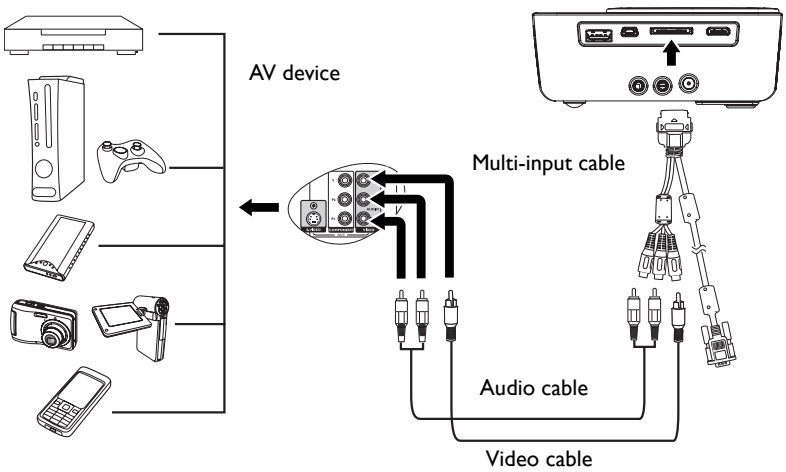
Connecting a composite Video source device

Examine your Video source device to determine if it has a set of unused composite Video output sockets available:

- If so, you can continue with this procedure.
- If not, you will need to reassess which method you can use to connect to the device.

To connect the projector to a composite Video source device:

1. Take a Video cable and connect one end to the composite Video output socket of the Video source device.
2. Connect the other end of the Video cable to the Video jack of the multi-input cable.
3. Connect the other end of the multi-input cable to the PC/AV socket on the projector.
4. Connect the multi-input cable to the **PC/AV** socket on the projector.
5. If you wish to make use of the projector speaker, take a suitable audio cable and connect one end of the cable to the audio output sockets of the Video source device, and the other end to the audio input sockets of the multi-input cable.

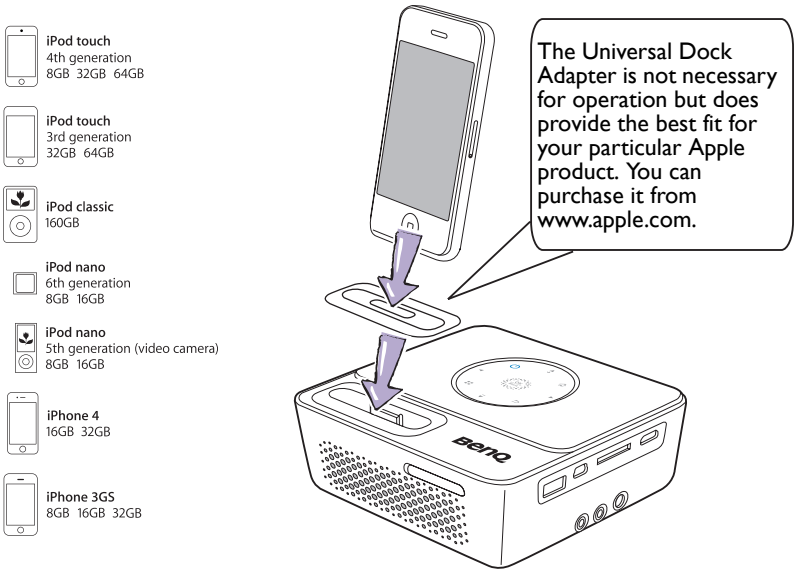


You need only connect to this device using a composite Video connection if Component Video input is unavailable for use. See "Connecting Video source devices" on page 20 for details.

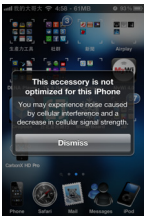
Connecting an iPhone/iPod device

To connect the projector to an iPhone/iPod device:

1. Dock your iPhone/iPod to fit the docking connector.



- **See "Playing files with iPhone/iPod" on page 39 for details.**
- **Please note that if your iPhone is covered with a protective case, it may cause a bad connection between the iPhone and the projector. When you connect the iPhone to the projector and see the error message displayed on the iPhone screen, please remove the protective case and connect it again. (Because of poor connection and pin detection failure, it cause the command cannot be communicated successfully.)**

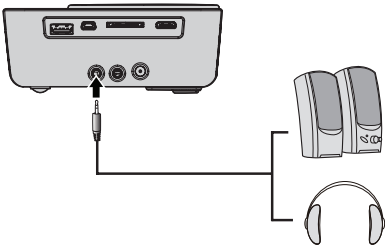

This accessory is not optimized for this iPhone
You may experience noise caused by cellular interference and a decrease in cellular signal strength.
Dismiss

Connecting an external speaker

You can hear sound through an external speaker instead of the internal speakers built into the projector.

To connect the projector to an external speaker source device:

1. Connect an appropriate stereo cable to the external speaker and the audio output jack on the projector.



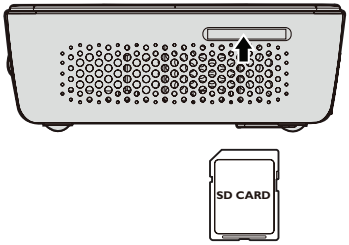
When the audio cable is connected to the audio output jack, the speaker output is muted.

Connecting to an external memory device

Connecting an SD card

To connect the projector to an SD card:

1. Connect an SD card to the SD card slot on the projector.

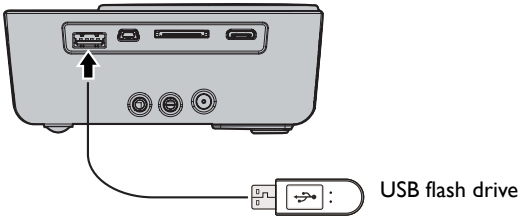


- **The maximum memory capacity supported for an SD(HC) card is 16 GB. (The maximum capacity supported for external memory is based on our factory test. Your experience may differ depending on the manufacturer of the memory device.)**
- **The projector may not be compatible with some SD cards.**

Connecting a USB storage device

To connect the projector to a USB storage device:

1. Plug the USB storage device into the Type A USB socket.



- **This product supports USB memory device and HDD (Hard Disk Drive) . Only one and only last one of partitions will be mounted. (The maximum capacity supported for external memory is based on our factory test. Your experience may differ depending on the manufacturer of the memory device.)**
- **This product does not support multi-card readers.**
- **This product does not work if the USB storage device is connected by a USB HUB.**
- **Some products which do not comply with standard USB specifications might not operate normally.**
- **A USB storage device with an automatic recognition application or its own driver might not operate normally.**
- **A USB storage device that uses only a designated driver might not be recognized.**
- **Recognition speed for USB storage device may vary by device.**

- **Do not turn off the product or pull a connected USB storage device out while the USB storage device is in use. Doing so may result in damage to the USB storage device or stored file.**
- **Use a USB storage device which contains normal files. Abnormal files can cause a malfunction or the files may not play.**
- **USB storages must be formatted in FAT16/FAT32/NTFS. FAT32 and NTFS are recommended for HDD (Hard Disk Drive).**
- **As the data in the USB storage device can be damaged, please back up important data to avoid loss. The user is responsible for data management. BenQ shall not be held liable for any data loss.**
- **File tree in USB storage should be as simple as possible. Too many or too many layers of folders will result in lag of access time.**
- **If an external memory device does not operate after you've connected it to the projector, try to connect it to a PC. If it still does not operate normally, contact the memory device's manufacturer service center or related customer center.**

Playing sound through the projector

You can make use of the projector speaker in your presentations, and also connect separate amplified speakers to the audio output jack of the projector.

The table below describes the connection methods for different devices, and where the sound is from.

Device	PC/Component video	Video
Audio input jack	Audio input (L/R) AUDIO-IN	Audio input (L/R)
The projector can play the sound from...	Audio input (L/R) AUDIO-IN	Audio input (L/R)
Audio output jack	🎧	🎧

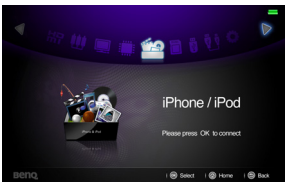
- **The selected input signal determines which sound will be played by the projector speaker, and which sound will be output from the projector when audio output jack is connected.**
- **There's no need to connect to an audio input jack because the projector can play the sound from an HDMI, external memory and iPhone/iPod source device. However, you can connect to an external device to play the sound.**
- **USB display doesn't support audio function.**

Operation

Starting up the projector

1. Connect the power using the AC adapter. The Power LED indicator turns into blue and flashes slowly.
2. Press **Power** on the projector or remote control to start the projector. The Power, **OK** and Ring LED indicators light blue when the projector is on.
   The start up procedure takes several seconds. In the later stage of start up, a startup logo is projected.
   (If necessary) Rotate the focus ring to adjust the image clearness.

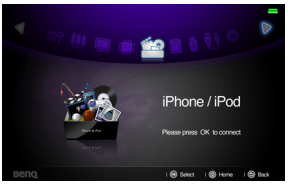
3. If the projector is activated for the first time, select your OSD language following the onscreen instructions.
4. If you are prompted for a password, press the arrow keys to enter a six digit password. See "Utilizing the password function" on page 32 for details.
5. Switch all of the connected equipment on.
6. The projector will display the home screen.



If the frequency/resolution of the input signal exceeds the projector's operating range, you will see the message 'Out of Range' displayed on a blank screen. Please change to an input signal which is compatible with the projector's resolution or set the input signal to a lower setting. See "Timing chart" on page 69 for details.

Switching input signal

The projector can be connected to multiple devices at the same time. However, it can only display one full screen at a time. Press ◀ / ▶ on the projector or remote control to select your desired input signal.



- **The input signal type effects the options available for the Picture Mode. See "Selecting the aspect ratio" on page 34 for details.**
- **The native display resolution of this projector is in a 16:10 aspect ratio. For best display picture results, you should select and use an input signal which outputs at this resolution. Any other resolutions will be scaled by the projector depending upon the 'aspect ratio' setting, which may cause some image distortion or loss of picture clarity. See "Selecting the aspect ratio" on page 34 for details.**

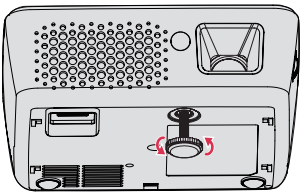
Adjusting the projected image

Adjusting the image height

The projector is equipped with 1 adjuster foot. This adjuster changes the image height. To adjust the projector:

1. Screw the adjuster foot to adjust the image height.

To retract the foot, screw the adjuster foot in a reverse direction.

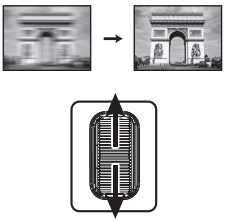


If the projector is not placed on a flat surface or the screen and the projector are not perpendicular to each other, the projected image becomes trapezoidal. To correct this situation, see "Correcting keystone" on page 31 for details.

- **Do not look into the lens while the lamp is on. The strong light from the lamp may cause damage to your eyes.**
- **Be careful when you screw the adjuster foot as it is close to the exhaust vent where hot air comes from.**

Fine-tuning the image clarity

1. Rotate the focus ring to sharpen the image.



Auto-adjusting the image

In some cases, you may need to optimize the picture quality.

- Using the remote control

Press **Auto**.

Within 3 seconds, the built-in Intelligent Auto Adjustment function will re-adjust the values of Frequency and Clock to provide the best picture quality.

The current source information will be displayed in the upper left corner of the screen for 3 seconds.

This function is only available when PC signal (analog RGB) is selected.

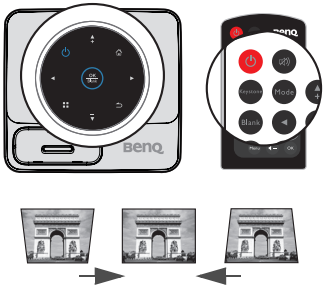
Correcting keystone

Keystoning refers to the situation where the projected image is noticeably wider at either the top or bottom. It occurs when the projector is not perpendicular to the screen. Correcting keystone when an image is displayed on the screen.

To correct this, besides adjusting the height of the projector, you will need to manually correct it following one of these steps.

- Using the remote control

Press **Keystone** on the remote control to display the Keystone correction page. Press ▲/▼ on the projector or remote control to correct keystone.



- Using the OSD menu

1. Press ⁘ and then press ▼ to highlight **Keystone**. The **Keystone** pop-up menu displays.
2. Press ▲ to correct keystoning at the bottom of the image or press ▼ to correct keystoning at the top of the image.

Press ▽/▲. **Press** △/▼.

Hiding the image

In order to draw the audience's full attention to the presenter, you can:

- Using the remote control

Use **Blank** on the remote control to hide the screen image. Press again **Blank** or any keys on the remote control to restore the image.

- Using the OSD menu

Press and hold **Blank** for 3 seconds on the projector to hide the screen image. Press again **Blank** or any keys on the projector to restore the image.

⚠ **Do not block the projection lens from projecting as this could cause the blocking object to become heated and deformed or even cause a fire.**

Securing the projector

Utilizing the password function

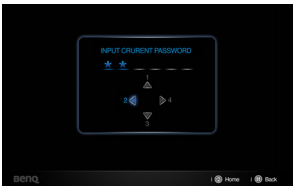
For security purposes and to help prevent unauthorized use, the projector includes an option for setting up password security. The password can be set through the Settings menu.

You will be inconvenienced if you activate the power-on lock functionality and subsequently forget the password. Print out this manual (if necessary) and write the password you used in this manual, and keep the manual in a safe place for later recall.

Setting power on lock

- **Once a password has been set, the projector cannot be used unless the correct password is entered every time the projector is started.**
- **When setting a password for the projector that its password function is used for the first time, enter the default password (1, 1, 1, 1, 1, 1) of the projector by pressing the arrow key five times if you are prompted for a password.**

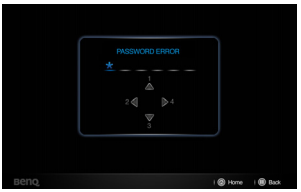
1. Press ◀ / ▶ until the **Settings** menu is highlighted and then press **OK** to enter.
2. Go to the **GENERAL** > **Security Settings** > **Change Security Settings** menu.
3. Press **OK**. The message **'Input Current Password'** displays.
4. As pictured to the right, the four arrow keys (▲, ▶, ▼, ◀) respectively represent 4 digits (1, 2, 3, 4). Press the arrow keys to enter six digits for the password.



5. Once the correct password is set, the OSD menu returns to the **Change Security Settings** menu.
6. Highlight **Power on Lock** and press **OK**. The pop-up menu displays. Select **On** and press **OK** to complete power on lock setting.
7. To leave the OSD menu, press ⮌ or ⌂.

If you forget the password

If the password function is activated, you will be asked to enter the six-digit password every time you turn on the projector. If you enter the wrong password, the password error message displays lasting for three seconds, and the message **'Input Password'** follows. If you enter an incorrect password 5 times in succession, the projector will automatically shut down in a short time.



Entering the password recall procedure

1. Press and hold ⁘ on the remote control for 3 seconds. The projector will display a coded number on the screen.
2. Write down the number and turn off your projector.
3. Seek help from the local BenQ service center to decode the number. You may be required to

provide proof of purchase documentation to verify that you are an authorized user of the projector.

Changing the password

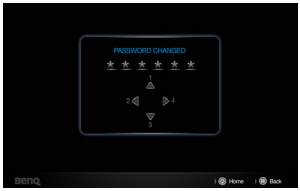
1. Go to the **Settings** > **GENERAL** > **Security Settings** > **Change password** menu.
2. Press **OK**. The message **'Input Current Password'** displays.
3. Enter the old password.
   - If the password is correct, another message **'Input New Password'** displays.
   - If the password is incorrect, the password error message displays lasting for three seconds, and the message **'Input Current Password'** displays for your retry. You can press ⮌ to cancel the change or try another password.
4. Enter a new password.

☞ **The digits being input will display as asterisks on-screen. Write your selected password down here in this manual in advance or right after the password is entered so that it is available to you should you ever forget it.**

Password: _ _ _ _ _ _

Keep this manual in a safe place.

5. Confirm the new password by re-entering the new password.
6. You have successfully assigned a new password to the projector. Remember to enter the new password next time the projector is started.
7. To leave the OSD menu, press ⮌ or ⌂.



Disabling the password function

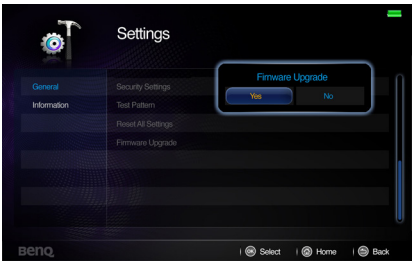
To disable password protection, go back to the **Settings** > **GENERAL** > **Security Settings > Power on Lock** menu. Select **Off** and press **OK.** The message**'Input Password'**displays. Enter the current password.

- If the password is correct, the OSD menu returns to the **Security Settings** page with **'Off'** shown in the row of **Power on Lock**. You will not have to enter the password next time you turn on the projector.
- If the password is incorrect, the password error message displays lasting for three seconds, and the message**'Input Password'**displays for your retry. You can press ⮌ to cancel the change or try another password.

☞ **Though the password function is disabled, you need to keep the old password in hand should you ever need to re-activate the password function by entering the old password.**

Firmware upgrade

Follow below procedures to upgrade firmware version.



- **Only an SD Card is supported for a firmware update.**
- **Do not remove the SD Card while an update is in progress.**
- **Do not operate any buttons during the update.**
- **Do not turn the projector off during the update.**
- **To confirm that the firmware has been successfully updated, go to Settings > Information > Firmware version.**

Updating the Firmware

1. Connect the containing the latest firmware to the projector.
2. Select **Settings > GENERAL > Firmware Upgrade** in the main menu page.
3. Select **OK** to begin.
4. After the firmware is updated, please turn off the projector.
5. Power on the projector and check the firmware version.

Selecting the aspect ratio

The 'aspect ratio' is the ratio of the image width to the image height. Most analog TV and computers are in 4:3 ratio, which is the default for this projector, and digital TV and DVDs are usually in 16:9 ratio.

With the advent of digital signal processing, digital display devices like this projector can dynamically stretch and scale the image output to a different aspect than that of the image input signal.

To change the projected image ratio (no matter what aspect the source is):

1. Press ⁘ to open the pop-up menu in one of the computer, iPhone/iPod, composite video, component and HDMI modes.
2. Press ▼ to highlight Aspect Ratio.
3. Press ◀ / ▶ to select an aspect ratio to suit the format of the video signal and your display requirements.

Optimizing the image

Selecting a picture mode

The projector is preset with several predefined picture modes so that you can choose one to suit your operating environment and input signal picture type.

To select an operation mode that suits your need, you can follow one of the following steps.

- Make sure the input source is on computer, iPhone/iPod, composite video, component and HDMI mode and the projection screen is displayed.
- Press **Mode** on the remote control projector repeatedly until your desired mode is selected.
- You may press ⁘ to open the pop-up menu. Press ▼ to select **Picture Mode Settings** and press **OK** to enter. Select **Picture Mode** and press ◀/▶ to select a desired mode.

The picture modes are listed below.

1. **Bright mode**: Maximizes the brightness of the projected image. This mode is suitable for environments where extra-high brightness is required, such as using the projector in well lit rooms.
2. **Standard mode (Default)**: Is designed for presentations. The brightness is emphasized in this mode.
3. **Cinema mode**: Is appropriate for playing colorful movies, video clips from digital cameras or DVs through the PC input for best viewing in a blackened (little light) environment.
4. **Game mode**: Is appropriate for playing games.
5. **User mode**: Recalls the settings customized based on the current available picture modes. See "Setting the User mode" on page 35 for details.

Setting the User mode

There is one user-definable modes if the current available picture modes are not suitable for your need. You can use one of the picture modes (except the **User**) as a starting point and customize the settings.

1. Press ⁘ to open the pop-up menu.
2. Press ▼ to select **Picture Mode Settings** and press **OK** to enter.
3. Select **Picture Mode** and press ◀/▶ to select **User**.
4. Press ▼ to highlight **Reference Mode**.

This function is only available when User mode is selected in the Picture Mode sub-menu item.

5. Press ◀/▶ to select a picture mode that is closest to your need.
6. Press ▼ to select a sub-menu item to be changed and adjust the value with ◀/▶. See "Fine-tuning the image clarity" below for details.
7. When all settings have been done, highlight **Save Settings** and press **OK** to store the settings.
8. The confirmation message '**Setting Saved**' displays.

Using Wall Color

In the situation where you are projecting onto a colored surface such as a painted wall which may not be white, the Wall Color feature can help correct the projected picture's color to prevent possible color difference between the source and projected pictures.

To use this function, press ⁘ to open the pop-up menu in one of the computer, iPhone/ iPod, composite video, component and HDMI modes. Select **Wall Color** and press ◀ / ▶ to select a color which is the closest to the color of the projection surface. There are several precalibrated colors to choose from: Light Yellow, Pink, Light Green, Blue, and Blackboard.

Fine-tuning the image quality in user mode

According to the detected signal type, there are some user-definable functions available when User mode is selected. Based on your needs, you can make adjustments tothese functions by highlighting them and pressing ◀ / ▶ on the projector or remote control

Adjusting Brightness

The higher the value, the brighter the image. And the lower the setting, the darker the image. Adjust this control so the black areas of the image appear just as black and that detail in the dark areas is visible.

Adjusting Contrast

The higher the value, the greater the contrast. Use this to set the peak white level after you have previously adjusted the **Brightness** setting to suit your selected input and viewing environment.

Adjusting Color

Lower setting produces less saturated colors. If the setting is too high, colors on the image will be overpowering, which makes the image unrealistic.

Adjusting Tint

The higher the value, the more reddish the picture becomes. The lower the value, the more greenish the picture becomes.

Adjusting Sharpness

The higher the value, the sharper the picture becomes. The lower the value, the softer the picture becomes.

Selecting a Color Temperature

There are four options available for color temperature* settings vary according to the signal type selected.

***About color temperatures:**

There are many different shades that are considered to be "white" for various purposes. One of the common methods of representing white color is known as the "color temperature". A white color with a low color temperature appears to be reddish white. A white color with a high color temperature appears to have more blue in it.

Operating in a high altitude environment

We recommend you use the **High Altitude Mode** when your environment is between 1500 m –3000 m above sea level, and ambient temperature is between 0°C–30°C.

Do not use the High Altitude Mode if your altitude is between 0 m and 1499 m and ambient temperature is between 0°C and 35°C. The projector will be over cooled, if you turn the mode on under such a condition.

To activate the **High Altitude Mode**:

1. Hightlight **Settings** and press **OK** to enter.
2. Go to **GENERAL** > **High Altitude Mode** and press **OK**.
3. Highlight **On** and press **OK** to confirm.
4. To leave the OSD, press ⮌ until the projector returns to the home screen, or press ⌂ to go back to the home screen directly.

Operation under "**High Altitude Mode**" may cause a higher decibel operating noise level because of increased fan speed necessary to improve overall system cooling and performance.

If you use this projector under other extreme conditions excluding the above, it may display auto shut-down symptoms, which is designed to protect your projector from over-heating. In cases like this, you should switch to High Altitude mode to solve these symptoms. However, this is not to state that this projector can operate under any and all harsh or extreme conditions.

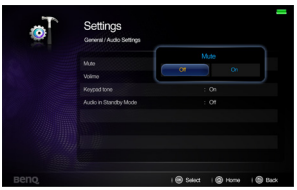
Adjusting the sound

The sound adjustments made as below will have an effect on the projector speaker(s). Be sure you have made a correct connection to the projector audio input. See "Connection" on page 17 for how the audio input is connected.

Muting the sound

To temporarily turn off the sound, press 🔇 on the remote control, or:

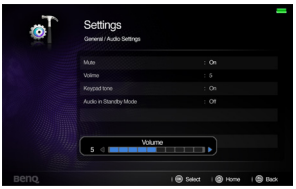
1. Hightlight **Settings** and press **OK** to enter.
2. Go to **GENERAL** > **Audio Settings** and press **OK** to enter.
3. Highlight **Mute** and press **OK** to open the pop-up menu.
4. Highlight **On** and press **OK** to confirm.
5. To leave the OSD, press ⮌ until the projector returns to the home screen, or press ⌂ to go back to the home screen directly.



Adjusting the sound level

To adjust the sound level, press + or - on the remote control, or:

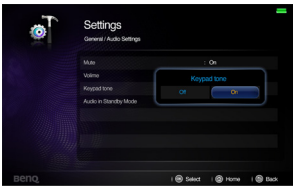
1. Repeat steps 1-2 above.
2. Highlight **Volume** and press **OK** to open the pop-up menu.
3. Press ◀ / ▶ to select a desired sound level.
4. To leave the OSD, follow step 5 above.



Setting the keypad tone

To set the keypad tone:

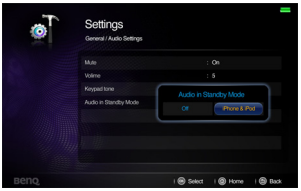
1. Repeat steps 1-2 in Muting the sound section.
2. Highlight **Keypad tone** and press **OK** to open the pop-up menu.
3. Highlight **On** and press **OK** to confirm.
4. To leave the OSD, follow step 5 in Muting the sound section.



Setting the audio in standby mode

To set the audio in standby mode:

1. Repeat steps 1-2 on muting the sound section.
2. Highlight **Audio in Standby Mode** and press **OK** to open the pop-up menu.
3. Highlight **iPhone& iPod** and press **OK** to confirm. After set on the **Audio in Standby Mode**, the projector can act as a docking speaker when music playback is in standby mode.
4. To leave the OSD, follow step 5 in Muting the sound section.



If Settings > GENERAL > Audio Settings > Audio in Standby Mode is set to iPhone/iPod, the projector can act as a docking speaker when music playback is in standby mode.

Playing files with iPhone/iPod

The projector comes with an all-in-one iPhone/iPod dock which support video projection and music playback through specific apps not only in power-on mode but also in standby mode.

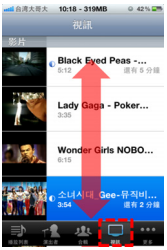
<In power-on mode>

Projecting videos via iPhone or iPod native app

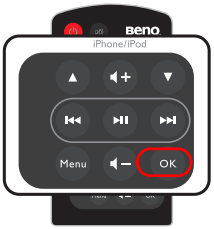
1. Dock your iPhone or iPod to fit the connector on the projector.
2. Use remote control to turn on the power of the projector and select the source of **iPhone/ iPod** in home screen. Press **OK** to enter.

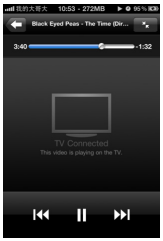
3. Select the **"iPod"** icon manually on iPhone or iPod main menu**.** (Here take an example of iPhone 4)

4. Press **Menu** on remote control to switch to **Videos** menu.
5. Use ▲/▼ to select a video in file list.



6. Press **OK** to start playing video.

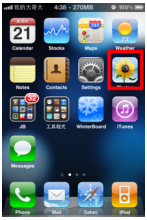




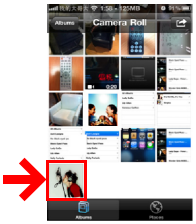
7. The video will be projected on a big screen.
8. When a video is playing, press ⏯ for Pause/Play. Press ⏮/⏭ for replay or skip to next video. Have long press on ⏮/⏭ to make the playing file rewind or fast-forward. Press 🔊+/🔊– to control the volume.

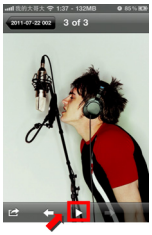
Projecting photo slideshow via iPhone or iPod native app

1. Select the **"Photos"** manually icon on iPhone or iPod main menu. Photos can only be projected as a slideshow. (Here take an example of iPhone 4)



2. Choose the photo you want to view in photo album . Press **Play** in iPhone or iPod album menu to start slideshow and the slideshow will instantly be projected on a big screen.

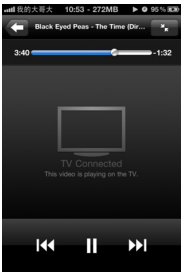




Projecting a 3rd party app

- Download and install an app that supports Apps TV-out function. (e.g., Youtube, Netflix, TVOut genie) For a list of apps that support Apple's TV-out function, please refer to TV-Out Enabled Apps for iOS Devices.pdf in internal memory.

- Launch the app from your device and the app will be automatically projected on a big screen. (Here take a example of Youtube)



- For some apps such as games, additional steps may be required. Follow the onscreen instructions of these apps.

Projecting a presentation

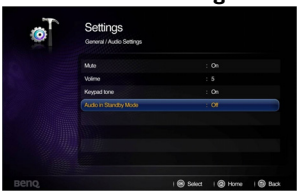
1. You must have a presentation app installed on your device that supports TV-out to use this function. (e.g., Presentation Viewer)
2. Launch the presentation app and the app will be automatically projected on a big screen.
3. For some presentation apps, the documents can only be viewed in slideshow mode.
4. Start the slideshow and the presentation will be instantly projected on a big screen.

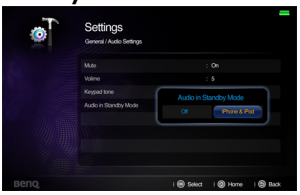
<In stand-by mode>

You can turn the projector into a docking speaker for your iPhone or iPod when it's in stand-by mode. Follow steps as below.

1. Enter **"Settings"** menu in projector home screen.

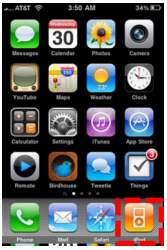
2. Set **General/Audio Settings/Audio in Standby Mode** to **iPhone/iPod** .



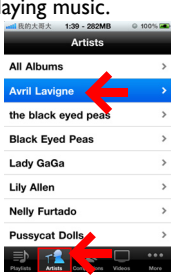


3. Turn off the projector and it will become a docking speaker.

4. Dock your iPhone or iPod on the projector.
5. Select the **iPod** icon in iPhone or iPod main menu.



6. Press **Menu** on remote control to switch to music-related menu, use ▲/▼ to select a music in file list and then press **OK** to start playing music.



If the iPhone or iPod is at the Main Menu, pressing Play/Pause will cause the iPhone or iPod to start playing all of its music.

7. When a song is playing, press ⏯ for Pause/Play. Press ⏮/⏭ for replay or skip to next song. Have long press on ⏮/⏭ to make the playing file rewind or fast-forward. Press 🔊+/🔉− to control the volume.

Operation iPhone or iPod during video or music playback

You are allowed to use remote control to operate your iPhone or iPod when the projector is in both of power-on and standby mode.

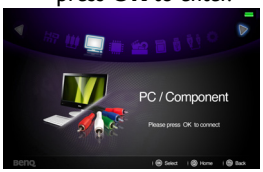
For more instructions on iPhone/iPod keys, see "iPhone/iPod" on page 13 for details.

Displaying images with PC and Video source devices

You can connect your projector to a PC and various Video source devices. (e.g. HDMI, composite video, component video) However, you need only connect the projector to an input source device.

To display images:

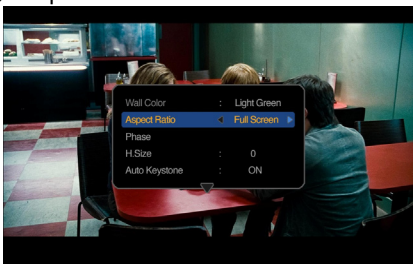
1. Connect the projector to one of the above signal source.
2. Turn on the power of the projector and your source device. The projector displays the home screen.
3. Press ◀/▶ on the projector or remote control to select the input signal and then press **OK** to enter.



4. Press ⮌ or ⌂ to go back to home screen.

Using PC/ Video pop-up menus

The projector has a multilingual OSD that allows you to make image adjustments and change a variety of settings. This menu is for the settings to be used in computer, iPhone/ iPod, composite video, component and HDMI modes.



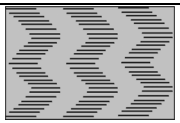
Using the menu

1. To open the OSD menu, press ⁘ on the projector or remote control when the projection screen is displayed.
2. When the OSD is displayed, press ▲/▼ to select the desired item and adjust the settings by using ◀/▶.
3. To leave the OSD, press ⁘ again.

Menu system

Menu Item	Sub-menu	Options
Wall Color		Off/Light Yellow/Pink/Light Green/ Blue/Blackboard
Aspect Ratio		Full Screen/4:3/16:9/16:10/Auto/ Real
Phase		
H. Size		
Auto Keystone		On/Off
Keystone		
Picture Mode Settings	Picture Mode	Bright/Standard/Cinema/Game/User
	Reference Mode	Bright/Standard/Cinema/Game
	Brightness	
	Contrast	
	Color	
	Tint	
	Sharpness	
	Color Temperature	T1/T2/T3/T4
	Save Settings	
Information		Source
		Resolution
		Color System

Description of each menu

FUNCTION	DESCRIPTION
Wall Color	Corrects the projected picture's color when the projection surface is not white. See "Using Wall Color" on page 35 for details.
Aspect Ratio	There are four options to set the image's aspect ratio depending on your input signal source. See "Selecting the aspect ratio" on page 34 for details.
Phase	Adjusts the clock phase to reduce image distortion.  **This function is only available when a PC signal (analog RGB) is selected.**
H. Size	Adjusts the horizontal width of the image. **This function is only available when a PC signal (analog RGB) is selected.**
Auto Keystone	Auto corrects any keystoning of the image.
Keystone	Corrects any keystoning of the image. See "Correcting keystone" on page 31 for details.
Picture Mode Settings	**Picture Mode** See "Selecting a picture mode" on page 35 for details. **Reference Mode** See "Setting the User mode" on page 35 for details. **This function is only available when User is selected.** **Brightness** See "Adjusting Brightness" on page 36 for details. **Contrast** See "Adjusting Contrast" on page 36 for details. **Color** See "Adjusting Color" on page 36 for details. **Tint** See "Adjusting Tint" on page 36 for details. **This function is only available the system format is NTSC.** **Sharpness** See "Adjusting Sharpness" on page 36 for details. **Color Temperature** See "Selecting a Color Temperature" on page 36 for details. **Save Settings** Saves the settings made for User mode.
Information	**Source** Shows the current signal source. **Resolution** Shows the native resolution of the input signal. **Color System** Shows input system format, NTSC, PAL, SECAM, or RGB.

Displaying files with internal memory, USB Drive and SD card

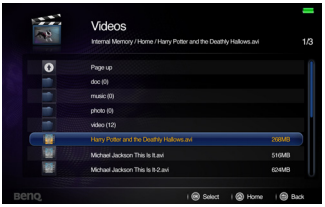
The projector can display files saved in internal memory or external storage like an SD card or a USB Drive when you have connected to projector.

To display files:

1. Turn on the power of the projector and the projector displays the home screen.
2. Connect the projector to one of the above external memory devices.
3. Press ◀/▶ to select SD card, USB Drive or internal memory.

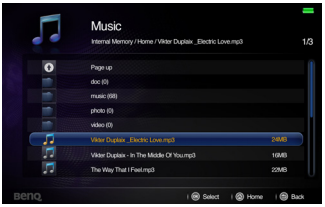
4. Storages are classified into **Videos, Photos, Music, Documents** menu in home screen. Press ▲/▼ to select desired item and then press **OK** to enter different file browser.

File browser window

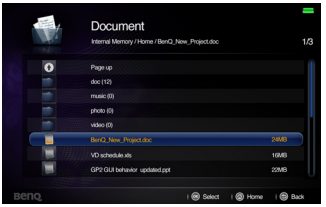


Videos

Photos



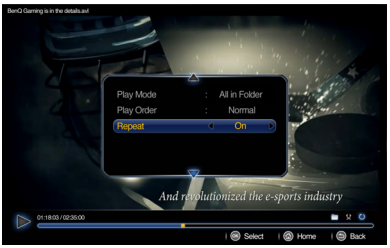
Music



Documents

- **You will only see relevant and supported files in each of file browser.**
- **If you want to disconnect external storages, please select Safe remove icon. See "Supported file formats" on page 56 for details.**

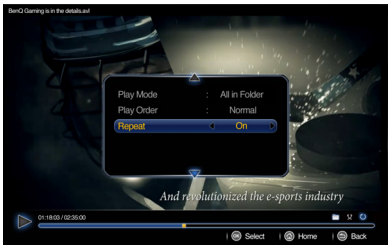
When playing videos



NAME		DESCRIPTION
OK	Play/Pause	Plays or pauses a video.
▲/▼	Volume	Volume up/down.
◄	Prev	• Plays the previous video. • Press and hold to rewind the video. - The rewind speed increases to x2, x4, x8 and x16 at 2-second intervals.
►	Next	• Plays the next video. • Press and hold to fast forward the video. - The fast-forward speed increases to x2, x4, x8 and x16 at 2-second intervals.
⁘	Menu	Open/close video pop-up settings menu.
⮌	Back	• Return to upper level of OSD. • Close video pop-up setting menu. • Leave current video player and back to video file browser.
⌂	Home	Exit video player and go back to home screen.

Video player pop-up settings menu

The video player pop-up menu provides an on-screen display (OSD) for adjustments when playing videos.



Using the menu

1. To open the OSD menu, press ⁘ on the projector or remote control when the projection screen is displayed.
2. When the OSD is displayed, press ▲/▼ to select the desired item and adjust the settings by using ◄/►.
3. To exit the OSD, press ⁘ on the projector or remote control again.

- **See the table for supported subtitle file types. Refer to "Supported file formats" on page 56.**

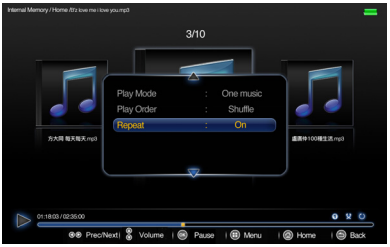
Menu system

Menu Item	Sub-menu	Options
Wall Color		Off/Light Yellow/Pink/Light Green/ Blue/Blackboard
Aspect Ratio		Full Screen/4:3/16:9/16:10/Auto/ Real
Auto Keystone		On/Off
Keystone		
Picture Mode Settings	Picture Mode	Bright/Standard/Cinema/Game/User
	Reference Mode	Bright/Standard/Cinema/Game
	Brightness	
	Contrast	
	Color	
	Tint	
	Sharpness	
	Color Temperature	T1/T2/T3/T4
	Save Settings	
Play Settings	Play Mode	All in folder/One video
	Play Order	Normal/Shuffle
	Repeat	On/Off

Description of each menu

FUNCTION	DESCRIPTION
Wall Color	Corrects the projected picture's color when the projection surface is not white. See "Using Wall Color" on page 35 for details.
Aspect Ratio	There are four options to set the image's aspect ratio depending on your input signal source. See "Selecting the aspect ratio" on page 34 for details.
Auto Keystone	Auto corrects any keystoning of the image.
Keystone	Corrects any keystoning of the image. See "Correcting keystone" on page 31 for details.
Picture Mode Settings	**Picture Mode** Pre-defined picture modes are provided so you can optimize your projector image set-up to suit your program type. **Reference Mode** Selects a picture mode that best suits your need for the image quality and further fine-tune the image based on the selections listed on the same page below. ☞ **This function is only available when User is selected.** **Brightness** Adjusts the brightness of the image. **Contrast** Adjusts the degree of difference between dark and light in the image. **Color** Adjusts the color saturation level -- the amount of each color in a video image. **Tint** Adjusts the red and green color tones of the image. ☞ **This function is only available the system format is NTSC.** **Sharpness** Adjusts the image to make it look sharper or softer. **Color Temperature** Adjusts the color temperature. At higher color temperatures, the screen looks colder; at lower color temperatures, the screen looks warmer. **Save Settings** Saves the settings made for User mode.
Play Settings	**Play Mode** Lets you choose to play one video or all videos in a folder. **Play Order** Lets you select the playback order of video files. **Repeat** Lets you select whether to repeat video playback.

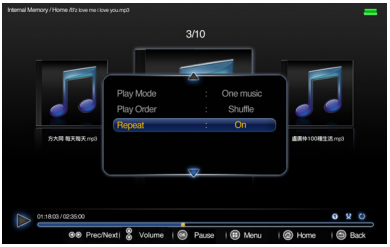
When playing music



NAME		DESCRIPTION
OK	Play/Pause	Plays or pauses a music.
▲/▼	Volume	Volume up/down.
◀	Prev	• Plays the previous music. • Press and hold to rewind the music.
▶	Next	• Plays the next music. • Press and hold to fast forward the music.
⁘	Menu	Open/close music pop-up settings menu.
⮌	Back	• Return to upper level of OSD. • Close video pop-up setting menu. • Leave current music player and back to music file browser.
⌂	Home	Exit music player and go back to home screen.

Music player pop-up settings menu

The music player pop-up menu provides an on-screen display (OSD) for adjustments when playing music.



Using the menu

1. To open the OSD menu, press ⁘ on the projector or remote control when the projection screen is displayed.
2. When the OSD is displayed, press ▲/▼ to select the desired item and adjust the settings by using ◀/▶.
3. To exit the OSD, press ⁘ on the projector or remote control again.

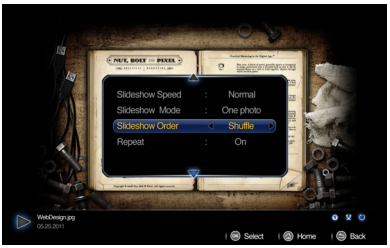
Menu system

Menu Item	Options
Play Mode	All in folder/One music
Play Order	Normal / Shuffle
Repeat	On/Off

Description of each menu

FUNCTION	DESCRIPTION
Play Mode	Lets you choose to play one music or all music in a folder.
Play Order	Lets you select the playback order of music files.
Repeat	Lets you select whether to repeat music playback.

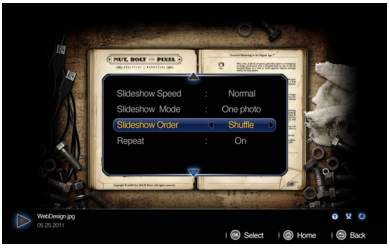
When viewing photos



NAME		DESCRIPTION
OK	Play/Pause	Plays or pauses a slideshow.
◀	Prev	Previous photo.
▶	Next	Next photo.
⁘	Menu	Open/close photo pop-up settings menu.
⮌	Back	• Return to upper level of OSD. • Close photo pop-up setting menu. • Leave current photo player and back to photo file browser.
⌂	Home	Exit photo player and go back to home screen.

Photo viewer pop-up settings menu

The photo view pop-up menu provides an on-screen display (OSD) for adjustments when viewing photos.



Using the menu

1. To open the OSD menu, press ⁘ on the projector or remote control when the projection screen is displayed.
2. When the OSD is displayed, press ▲/▼ to select the desired item and adjust the settings by using ◀/▶.
3. To exit the OSD, press ⁘ on the projector or remote control again.

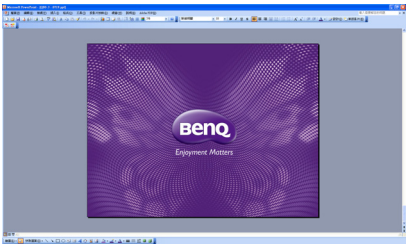
Menu system

Menu Item	Options
Slideshow Speed	Fast/ Normal/ Slow
Slideshow Mode	All in folder / One photo
Slideshow Order	Normal / Shuffle
Repeat	On/Off

Description of each menu

FUNCTION	DESCRIPTION
Slideshow Speed	Lets you select slideshow speed.
Slideshow Mode	Lets you choose to slideshow one photo or all photos in a folder.
Slideshow Order	Lets you select the slideshow order of photo files.
Repeat	Lets you select whether to repeat slideshow.

When viewing documents



NAME		DESCRIPTION
OK	Play/Pause	Enlarge current page.
▲	Previous	Move to previous page while page is not zoomed. Move the display to the top of the page while zoomed.
▼	Next	Move to next page while page is not zoomed. Move the display to bottom of the page while zoomed.
◀	Move to left	Move the display to left side of the page while zoomed.
▶	Move to right	Move the display to right side of the page while zoomed.
⮌	Back	Leave current document viewer and back to document file browser.
⌂	Home	Exit document viewer and go back to home screen.

- **Loading time may be longer for large files.**
- **Document viewer may not work properly when a file does not comply with standards or it is damaged.**
- **Document viewer may not work when a file contains too much data to display on a screen. (For example, too much data on one sheet in an Excel file.)**
- **Document viewer supports only one font. If a screen uses other fonts, the image Media Play displays may be different than the original screen.**
- **For example:**
- **1. The position of line breaks in a sentence might be dissimilar.**
- **2. The position of page breaks in a MS Word document might be changed. In this case, the document might be shown incompletely according to the Layout properties for Picture or Shapes or Object in MS word . (Please refer to the manual of MS Word for more information on the Layout properties.)**
- **Some functions supported on your PC are not supported by the projector, such as these PowerPoint functions: Animation, 3D, Smart Art, Hyper Link, and Transparency and Gradation.**
- **This product does not support encrypted files (DRM).**

Supported file formats

- **Document, Photo, Music**

ITEM	FILE EXTENSION
Document	Adobe PDF 1.0~1.4 (PDF)
	MS powePoint 97~2010 (ppt, pptx)
	MS Excel 95~2010 (xls, xlsx)
	MS Word 95~2010 (doc, docx)
Photo	JPG, BMP, PNG
Music	MP3, MP2, APE, FLAC, OGG, WAV

- **Video, Subtitles**

ITEM	FILE EXTENSION	DESCRIPTION
Video	FLV	Max 1920x1080 30fps
Subtitles	MKV build-in, SRT(.srt).	• Subtitle files must be in same directory as the video files. • The name of subtitle files shall be the same as the name of video files.
Bit rate range : If peak bit rate of a video file is larger than 10MB, it might cause video playback lag.		

Please visit BenQ.com to know more details about the latest supported formats.

Using USB Streaming

The projector supports USB streaming for USB display and USB file transfer.

USB display

The projector can project computer screen via a USB cable instead of a VGA cable.

To use USB display:

1. Connect the projector to a computer using a USB cable.
2. Turn on the power of the projector and your source device. The projector displays the home screen.
3. Press ◀ / ▶ to select USB Streaming.
4. Press ▲ / ▼ to select USB Display and then press **OK** to enter.
5. If your computer can automatically install USB driver, you can see computer's screen.
6. If computer's screen can't be projected, please go to "My Computer", find the "BenQUSB EZ Display" (same as using a flash disk drive), then run the "Autorun.exe" file.
7. Press ⮌ or ⌂ to leave computer projection screen and back to projector home screen.

☞ • **If the Microsoft Windows system installed on your PC is Windows 7 or later version, you need to install the driver manually. Just follow the on-screen instruction.**

• **This function can't support Mac OS devices.**

Win 2000	Win XP SP2 32Bit	Win XP 64Bit	Win Vista 32 bit	Win Vista 64 bit	Win7 32 bit	Win7 64bit	MAC
x	v	x	v	v	v	v	x

USB file transfer

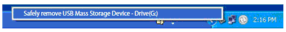
You can connect the projector to transfer files from your computer to the projetor. The files will be saved in the internal menory, and you can project images from the projector.

To use USB file transfer:

1. Connect the projector to a computer using a USB cable.
2. Turn on the power of the projector and your source device. The projector displays the home screen.
3. Press ◀ / ▶ to select USB Streaming.
4. Press ▲ / ▼ to select USB File Transfer and then press **OK** to enter.
5. If the connection is sucessful, you will see "It is in USB file transfer mode." message on the screen.
6. Look for a new "removable disk" icon. This "removable disk" is actually the internal memory in your projector.

7. Copy & Paste or Drag-N-Drop files from your computer to the removable disk.
8. If you want to display those files, use ◀/▶ to select Internal Memory. See "Displaying files with internal memory, USB Drive and SD card" on page 47 for details.
9. Press ⮌ or ⌂ to leave USB File Transfer mode and back to projector home screen.

To disconnect the projector from a PC:



Make sure to end the connection properly to prevent damage to the projector or your data.

1. Click on the Windows Taskbar.
2. Click the pop-up message.
3. Disconnect the USB cable only when the message says that it is safe to remove the hardware.

- **Do not disconnect the USB cable while the files are being copied, as this could result in loss of data or damage to the projector.**
- **The connection will not end if you have projector files open on the PC. Close all projector files and try again.**
- **Other versions of Windows operate similarly. Follow the correct procedure for removing a USB device from your PC safely for your version of Windows.**
- **This function can't support Mac OS devices.**

Using settings menu

This menu is to set the projector's operating environment.

Using the menu

1. To open the OSD menu, press ◀/▶ to select **Settings** icon in home screen..
2. When the OSD is displayed, press ▲/▼ to select any item in the main menu.
3. After selecting the desired main menu item, press **OK** to enter the feature settings submenu.
4. Press ▲/▼ to select the desired item and press **OK** to open the pop-up menu.
5. Select the settings using ▲/▼/◀/▶ and press **OK** to confirm. Once the setting is selected, the OSD menu returns to the selected item.
6. Press ⮌ to return to the main menu.
   You may press ⌂ to go back to home screen directly.
7. Press ⮌ again to go back to home screen.

Menu system

Main menu	Sub-menu		Options
1. GENERAL	Language		English / Français / Deutsch Italiano / Español / Русский 繁體中文 / 简体中文 / 日本語 / 한국어 / Svenska / Nederlands / Türkçe/ Čeština / Português / ไทย / Polski Magyar/ Български/ Hrvatski/ Română/ Suomi/ Norsk/ Dansk /Indonesian/Ελληνικά/ العربية / हिन्दी
	LED Mode		Normal/Eco
	Wall Color		Off/Light Yellow/Pink/Light Green/ Blue/Blackboard
	Auto Keystone		On/Off
	Auto Power Off		Disable/5 min/10 min/15 min/20 min/25 min/30 min
	Splash Screen		BenQ/ Black/Blue
	High Altitude Mode		On/Off
	Audio Settings	Mute	On/Off
		Volume	
		Keypad tone	On/Off
		Audio in Standby Mode	Off/iPhone& iPod
	Menu Display Time		5 sec/10 sec/15 sec/20 sec/25 sec/ 30 sec
	Security Settings	Change Password	
		Recall Password	
		Change Security Settings	
		Power On Lock	On/Off
	Test Pattern		
	Reset All Settings		
	Firmware Upgrade		
2. INFORMATION	Source		
	Picture Mode		
	Color System		
	Resolution		
	Internal Memory		
	SD Card		
	USB Drive		
	Firmware Version		

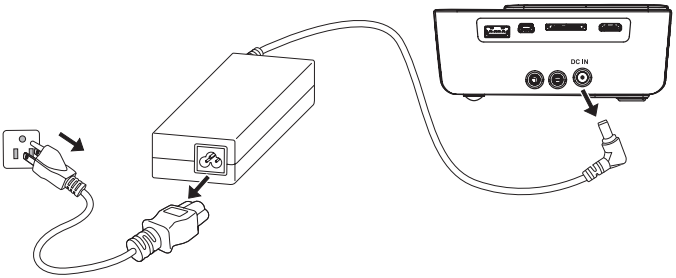
Description of each menu

	FUNCTION	DESCRIPTION
I. GENERAL menu	**Language**	Sets the language for the On-Screen Display (OSD) menus.
	LED Mode	Choose **Eco** to dim the projector LED which will lower power consumption, extend the LED life and reduce noise. Choose **Normal** to return normal mode.
	Wall Color	Corrects the projected picture's color when the projection surface is not white.
	Auto Keystone	Auto corrects any keystoning of the image.
	Auto Power Off	Allows the projector to turn off automatically if no input signal is detected after a set period of time.
	Splash Screen	Allows you to select which logo screen will display during projector start-up. Three options are available: BenQ logo, Black screen, or Blue screen.
	High Altitude Mode	A mode for operation in high altitude areas. See "Operating in a high altitude environment" on page 37for details.
	Audio Settings	See "Adjusting the sound" on page 37 for details.
	Menu Display Time	Sets the length of time the OSD will remain active after your last key press. The range is from 5 to 30 seconds in 5-second increments.
	Security Settings	See "Securing the projector" on page 32 for details.
	Test Pattern	Selecting **OK** enables the function and the projector displays the grid test pattern. It helps you adjust the image size and focus and check that the projected image is free from distortion.
	Reset All Settings	Returns all settings to the factory preset values.
	Firmware Upgrade	Updating the latest firmware are only allowed via an SD card.

FUNCTION		DESCRIPTION
2. INFORMATION menu	**Source**	Shows the current signal source.
	Picture Mode	Shows the selected mode.
	Color System	Shows input system format: RGB or YUV.
	Resolution	Shows the native resolution of the input signal.
	Internal Memory	Shows the memory capacity status: Internal Memory.
	SD Card	Shows the memory capacity status: SD Card.
	USB Drive	Shows the memory capacity status: USB Drive.
	Firmware Version	Shows firmware version.

Shutting down the projector

1. Press ⏻ **Power** and a confirmation message displays prompting you.
   If you don't respond in a few seconds, the message will disappear.
2. Press ⏻ **Power** a second time.
3. The Power LED indicator flashes blue slowly and fans stop.
4. Disconnect the power cord from the wall socket if the projector will not be used in an extended period of time.



Maintenance

Care of the projector

Your projector needs little maintenance. The only thing you need to do on a regular basis is to keep the lens clean.

Never remove any parts of the projector. Contact your dealer if other parts need replacing.

Cleaning the lens

Clean the lens whenever you notice dirt or dust on the surface.

- Use a canister of compressed air to remove dust.
- If there is dirt or smears, use lens-cleaning paper or moisten a soft cloth with lens cleaner and gently wipe the lens surface.

⚠ **Never rub the lens with abrasive materials.**

Cleaning the projector case

Before you clean the case, turn the projector off using the proper shutdown procedure as described in "Shutting down the projector" on page 63 and unplug the power cord.

- To remove dirt or dust, wipe the case with a soft, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral pH detergent. Then wipe the case.

⚠ **Never use wax, alcohol, benzene, thinner or other chemical detergents. These can damage the case.**

Storing the projector

If you need to store the projector for an extended time, please follow the instructions below:

- Make sure the temperature and humidity of the storage area are within the recommended range for the projector. Please refer to "Specifications" on page 67 or consult your dealer about the range.
- Retract the adjuster feet.
- Remove the battery from the remote control.
- Pack the projector in its original packing or equivalent.

Transporting the projector

It is recommended that you ship the projector with its original packing or equivalent.

LED Indicators

Status / Problems	LED indicators			LED Behavior
	Power	OK & Ring	Key	
Standby	Blue	Off	Off	Power LED slow flash
Power on	Blue	Blue	White	Light solid on sequence : Power->Key->Ring & OK
Cooling	Blue	Off	Off	Power LED slow flash
Fan1 error	Off	Blue	White	Ring & OK LED flash first and then key LED flash (1.5 seconds interval)
Temp error	Off	Blue	White	Ring & OK LED and Key LED flash at the same time (1.5 seconds interval for LED flash)

Troubleshooting

ⓘ The projector does not turn on.

Cause	Remedy
There is no power from the power cable.	Plug the AC adapter into the DC IN socket on the projector, plug the power cord into the AC inlet on the AC adapter, plug the power cord into the power outlet. If the power outlet has a switch, make sure that it is switched on.
Attempting to turn the projector on again during the cooling process.	Wait until the cooling down process has completed.

ⓘ No picture

Cause	Remedy
The source is not turned on or connected correctly.	Turn the source on and check that the signal cable is connected correctly.
The projector is not correctly connected to the input signal device.	Check the connection.
The input signal has not been correctly selected.	Select the correct input signal with the ◀ / ▶ key on the projector or remote control.

ⓘ Blurred image

Cause	Remedy
The projection lens is not correctly focused.	Adjust the focus of the lens using the focus ring.
The projector and the screen are not aligned properly.	Adjust the projection angle and direction as well as the height of the unit if necessary.

ⓘ Remote control does not work

Cause	Remedy
The battery is out of power.	Replace the battery with new one.
There is an obstacle between the remote control and the projector.	Remove the obstacle.
You are too far away from the projector.	Stand within 7 meters (23 feet) of the projector.

ⓘ The password is incorrect

Cause	Remedy
You do not remember the password.	Please see "Entering the password recall procedure" on page 32 for details.

Specifications

Projector specifications

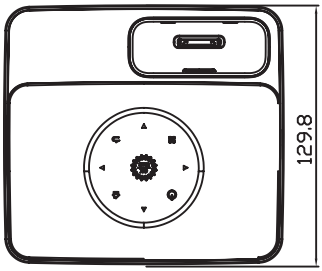
All specifications are subject to change without notice.

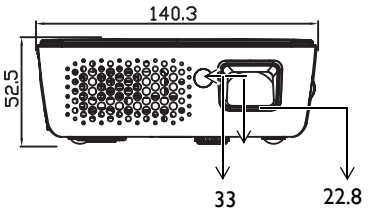
General	
Product name	Mini Projector
Model name	GP2
Optical	
Resolution	1280 x 800 WXGA
Display system	1-CHIP DMD
Lens F/Number	F = 1.928 f = 26.95 mm
Lamp	LED
Throw Ratio	1.13 (44" @ 1m)
Electrical	
Power supply	AC100–240V, 3.20 A, 50-60 Hz (Automatic)
Power consumption	48 W (Max.); < 1 W (Standby)
Keystone Adjustment	1D, Vertical +/- 40 degrees
Mechanical	
Dimensions	140.3 mm (W) x 52.5 mm (H) x 129.8 mm (D)
Weight	565g
Input terminal	
Multi-input	
Computer input	D-Sub 15-pin (female) x 1
Component input	Analog - D-Sub <-> Component RCA jack x 3 (through RGB input) HDMI Digital Video x1 (mini type)
Video input	RCA jack x 1
HDMI	HDMI (v1.3) : x1 (mini type)
Audio input	RCA jack x 2 3.5 mm stereo mini jack x 1
USB-A type	For USB flash drive. Supports videos/photos/music/ documents.
mini-B USB type	Supports USB display and USB file transfer
SD card slot	Supports videos/photos/music/documents
iPhone/iPod input	with embedded iPhone/iPod dock
Internal memory	2GB (1.3 GB for user usage)
Output terminal	
Audio output	3.5 mm stereo mini jack x 1
Environmental Requirements	
Operating temperature	0°C-40°C at sea level

Operating relative humidity	10%-90% (without condensation)
Operating altitude	• 0–1499 m at 0°C–35°C • 1500–3000 m at 0°C–30°C (with High Altitude Mode on)

Dimensions

140.3 mm (W) x 52.5 mm (H) x 129.8 mm (D)





Timing chart

Supported timing for PC input

Resolution	Mode	Vertical Frequency (Hz)	Horizontal Frequency (kHz)
720 x 400	720 x 400_70	70.087	31.469
640 x 480	VGA_60	59.940	31.469
	VGA_75	75.000	37.500
	VGA_85	85.008	43.269
800 x 600	SVGA_60	60.317	37.879
	SVGA_75	75.000	46.875
	SVGA_85	85.061	53.674
1024 x 768	XGA_60	60.004	48.363
	XGA_70	70.069	56.476
	XGA_75	75.029	60.023
	XGA_85	84.997	68.667
1152 x 864	1152 x 864_75	75.00	67.500
1024 x 576	BenQ Notebook Timing	60.0	35.820
1024 x 600	BenQ Notebook Timing	64.995	41.467
1280 x 720	1280 x 720_60	60	45.000
1280 x 768	1280 x 768_60	59.870	47.776
1280 x 800	WXGA_60	59.810	49.702
	WXGA_75	74.934	62.795
	WXGA_85	84.880	71.554
1280 x 1024	SXGA_60	60.020	63.981
	SXGA_75	75.025	79.976
1280 x 960	1280 x 960_60	60.000	60.000
1360 x 768	1360 x 768_60	60.015	47.712
1440 x 900	WXGA+_60	59.887	55.935
1400 x 1050	SXGA+_60	59.978	65.317
1680 x 1050	1680 x 1050_60	59.954	65.290
640 x 480 @67Hz	MAC13	66.667	35.000
832 x 624@75Hz	MAC16	74.546	49.722
1024 x 768@75Hz	MAC19	74.93	60.241
1152 x 870@75Hz	MAC21	75.06	68.68

Supported timing for HDMI input

PC timings:

Resolution	Mode	Vertical Frequency (Hz)	Horizontal Frequency (kHz)
640 x 480	VGA_60	59.940	31.469
	VGA_72	72.809	37.861
	VGA_75	75.000	37.500
	VGA_85	85.008	43.269
720 x 400	720 x 400_70	70.087	31.469
800 x 600	SVGA_60	60.317	37.879
	SVGA_72	72.188	48.077
	SVGA_75	75.000	46.875
	SVGA_85	85.061	53.674
1024 x 768	XGA_60	60.004	48.363
	XGA_70	70.069	56.476
	XGA_75	75.029	60.023
	XGA_85	84.997	68.667
1152 x 864	1152 x 864_75	75.00	67.500
1024 x 576	BenQ Notebook Timing	60.000	35.820
1024 x 600	BenQ Notebook Timing	64.995	41.467
1280 x 720	1280 x 720_60	60	45.000
	1280 x 720_120	120	90.000
1280 x 768	1280 x 768_60	59.870	47.776
1280 x 800	WXGA_60	59.810	49.702
	WXGA_75	74.934	62.795
	WXGA_85	84.880	71.554
1280 x 1024	SXGA_60	60.020	63.981
	SXGA_75	75.025	79.976
1280 x 960	1280 x 960_60	60.000	60.000
	1280 x 960_85	85.002	85.938
1360 x 768	1360 x 768_60	60.015	47.712
1440 x 900	WXGA+_60	59.887	55.935
1400 x 1050	SXGA+_60	59.978	65.317
1680 x 1050	1680 x 1050_60	59.954	65.290
640 x 480@67Hz	MAC13	66.667	35.000
832 x 624@75Hz	MAC16	74.546	49.772
1024 x 768@75Hz	MAC19	75.020	60.241
1152 x 870@75Hz	MAC21	75.06	68.68

Video timings:

Timing	Resolution	Vertical Frequency (Hz)	Horizontal Frequency (kHz)
480i*	720 (1440) x 480	59.94	15.73
480p	720 x 480	59.94	31.47
576i	720 (1440) x 576	50	15.63
576p	720 x 576	50	31.25
720/50p	1280 x 720	50	37.5
720/60p	1280 x 720	60	45.00
1080/24P	1920 x 1080	24	27
1080/25P	1920 x 1080	25	28.13
1080/30P	1920 x 1080	30	33.75
1080/50i	1920 x 1080	50	28.13
1080/60i	1920 x 1080	60	33.75
1080/50P	1920 x 1080	50	56.25
1080/60P	1920 x 1080	60	67.5

Supported timing for Component-YPbPr input

Timing	Resolution	Vertical Frequency (Hz)	Horizontal Frequency (kHz)
480i*	720 x 480	59.94	15.73
480p	720 x 480	59.94	31.47
576i	720 x 576	50	15.63
576p	720 x 576	50	31.25
720/50p	1280 x 720	50	37.5
720/60p	1280 x 720	60	45.00
1080/50i	1920 x 1080	50	28.13
1080/60i	1920 x 1080	60	33.75
1080/24P	1920 x 1080	24	27
1080/25P	1920 x 1080	25	28.13
1080/30P	1920 x 1080	30	33.75
1080/50P	1920 x 1080	50	56.25
1080/60P	1920 x 1080	60	67.5

Supported timing for Video input

Video mode	Vertical Frequency (Hz)	Horizontal Frequency (kHz)
NTSC*	60	15.73
PAL	50	15.63
SECAM	50	15.63
PAL-M	60	15.73
PAL-N	50	15.63
PAL-60	60	15.73
NTSC4.43	60	15.73

Warranty and Copyright information

Patents

This BenQ projector is covered by the following patents:

U.S. patents 6,837,608; 7,275,834; 7,181,318; TW patents 202690; 205470; I228635; I259932; China Patents (中国发明专利) ZL01143168.7; ZL03119907.0; ZL200510051609.2

Limited warranty

BenQ warrants this product against any defects in material and workmanship, under normal usage and storage.

Proof of purchase date will be required with any warranty claim. In the event this product is found to be defective within the warranty period, BenQ's only obligation and your exclusive remedy shall be replacement of any defective parts (labor included). To obtain warranty service, immediately notify the dealer from which you purchased the product of any defects.

Important: The above warranty shall be void if the customer fails to operate the product in accordance with BenQ's written instructions, especially the ambient humidity must be in-between 10% and 90%, temperature in-between 0°C and 35°C, altitude lower than 4920 feet, and avoiding to operate the projector in a dusty environment. This warranty gives you specific legal rights, and you may have other rights which vary from country to country.

For other information, please visit www.BenQ.com.

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